

READ AND KEEP THIS FOR FUTURE REFERENCE



## CARE AND OPERATING INSTRUCTIONS

**HEAVY DUTY**

# CHOP SAWS

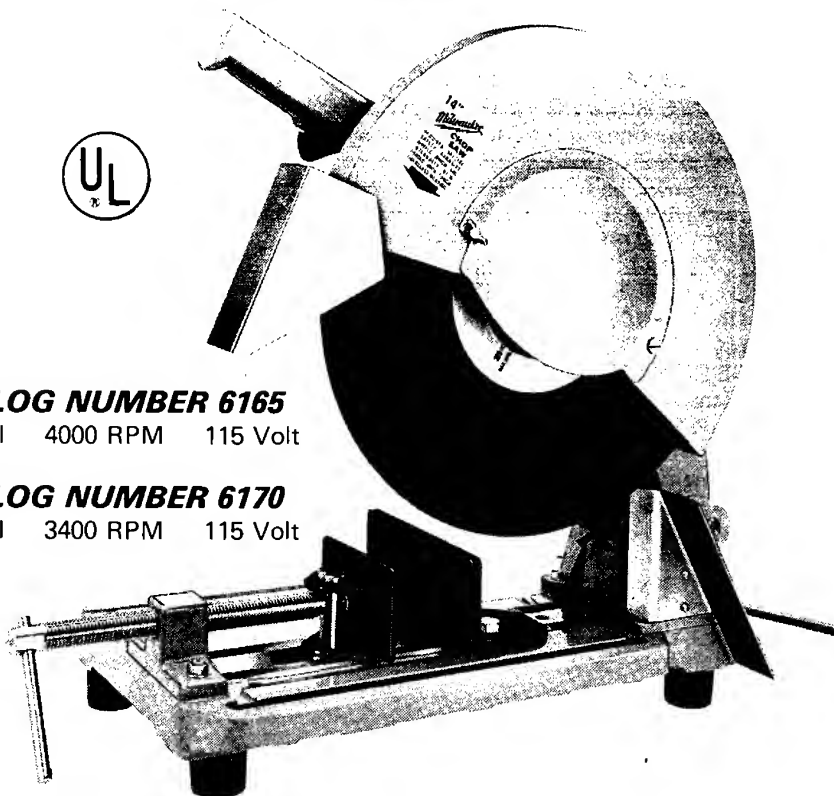


### **CATALOG NUMBER 6165**

12" Wheel    4000 RPM    115 Volt

### **CATALOG NUMBER 6170**

14" Wheel    3400 RPM    115 Volt



**IMPORTANT**—Before placing tool in operation, record the following information from nameplate.

Catalog No. \_\_\_\_\_ Serial Number \_\_\_\_\_ Date of Purchase \_\_\_\_\_

**MILWAUKEE ELECTRIC TOOL CORPORATION**

13135 West Lisbon Road • Brookfield, Wisconsin 53005

THIS SYMBOL ...



... IS YOUR ASSURANCE

1. That every tool manufactured by MILWAUKEE is produced in accordance with applicable Standards for Safety of Underwriters' Laboratories and American National Standards (ANSI).
2. That compliance with applicable safety standards is assured by independent inspection and testing conducted by Underwriters' Laboratories (UL).
3. That every motorized tool manufactured by MILWAUKEE is fully inspected.
4. That every tool has with it adequate instructions and a list of safety rules for the protection of the user.

**WARNING:** When using electric tools, basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury including the following items. Read all instructions and save them for future reference.

### SAFETY INSTRUCTIONS

1. **KEEP GUARDS IN PLACE** and in working order.
2. **REMOVE ADJUSTING WRENCH.** Form habit of checking to see that adjusting wrench is removed from tool before turning it on.
3. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
4. **DON'T USE IN DANGEROUS ENVIRONMENT.** Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.
5. **KEEP CHILDREN AWAY.** All visitors should be kept safe distance from work area.
6. **STORE IDLE TOOLS.** When not in use, tools should be stored in a dry, high or locked-up place—out of reach from children.
7. **DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was designed.
8. **USE RIGHT TOOL.** Don't force tool or attachment to do a job for which it was not designed.
9. **WEAR PROPER APPAREL.** No loose clothing or jewelry to get caught in moving parts. Rubber gloves and insulated non-skid footwear are recommended when working outdoors. Wear protective covering to contain long hair.
10. **ALWAYS USE SAFETY GLASSES.** Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses—they are not safety glasses.
11. **SECURE WORK.** Use clamps or a vise to hold work when practical. It's safer than using your hand.
12. **DON'T OVERREACH.** Keep proper footing and balance at all times.
13. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for best and safest performance.
14. **DISCONNECT TOOLS** before servicing; when changing accessories such as cut-off wheel and so on.
15. **AVOID THE RISK OF UNINTENTIONAL STARTING.** Make sure switch is in OFF position before plugging in.
16. **CHECK DAMAGED PARTS AND MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean at all times for best and safest performance. Follow instructions for lubricating and changing accessories. Keep handles dry, clean and free of oil or grease. Inspect switches, tool cords and extension cords periodically and have them repaired or replaced by an authorized service facility if damaged. Check moving parts for alignment and binding as well as for breakage and improper mounting. Damaged parts should be repaired or replaced by an authorized service facility unless otherwise indicated in this instruction book. **CAUTION:** Do not use carbon tetrachloride.

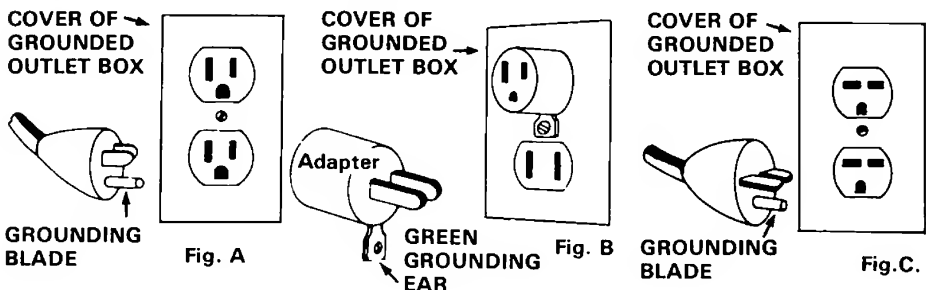
17. **NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF.** Don't leave tool until it comes to a complete stop.
18. **REPLACE CRACKED CUT-OFF WHEEL IMMEDIATELY.** Always use reinforced cut-off wheel.
19. **USE ONLY CUT-OFF WHEEL** with "Safe Speed" at least as high as the no load RPM marked on the nameplate.
20. **DO NOT EXERT IMPACT** upon the cut-off wheel.
21. **NEVER MODIFY A CUT-OFF WHEEL** to fit an arbor for which it was not designed.
22. **DON'T ABUSE CORD.** Never carry tool by cord or yank it to disconnect from receptacle. Keep cord away from heat, oil and sharp edges.
23. **OUTDOOR USE EXTENSION CORDS**—When tool is used at outdoors with extension cords, use only extension cords suitable for use outdoors and so marked.
24. **USE RECOMMENDED ACCESSORIES.** Consult the owner's manual for recommended accessories. The use of improper accessories may cause risk of injury to persons.
25. **NEVER STAND ON TOOL.** Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.
26. **DIRECTION OF FEED.** Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
27. **GUARD AGAINST ELECTRIC SHOCK.** Prevent body contact with grounded surfaces such as pipes, radiators, ranges and refrigerator enclosures.
28. **DO NOT** overtighten the wheel nut.
29. **USE** only the flanges furnished with this grinder.
30. **SUPPORT** workpiece with backstop or worktable.
31. **WEAR EAR PROTECTORS** when using for extended periods.

## GROUNDING INSTRUCTIONS

This tool should be grounded while in use to protect the user from electric shock. The tool is equipped with an approved three conductor cord and three prong grounding-type plug to fit the proper grounding-type receptacle. The green conductor or green conductor with yellow stripes in the cord is the grounding wire. Never connect this wire to a live terminal. If your unit is for use on less than 150 volts, it has a plug that looks like figure "A". If it is for use on 150 to 250 volts, it has a plug that looks like figure "C".

### NOTE

The use of three-prong adapters in Canada is prohibited by the Canadian Electrical Code.



An adapter, Figure "B", is available for connecting Figure "A" type plugs to two prong receptacles. The green grounding ear or wire extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box. No adapter is available for Figure "C" type plugs.

**NOTE: THE RECEPTACLE MUST BE GROUNDED FOR SAFE USE OF ADAPTER; IF IN DOUBT, CALL A QUALIFIED ELECTRICIAN AND HAVE THE RECEPTACLE CHECKED FOR GROUND.**

## EXTENSION CORD CHART

When an extension cord is used, it should also be a 3 wire cord to permit proper grounding of the tool. As the distance from the supply outlet increases, heavier gauge extensions are required. The use of extension cords of inadequate size wire causes a serious drop in voltage, loss of power and possible motor damage. This table is based on limiting line voltage drop to 5 volts at 150% of rated amperes.

Ampere rating (on Nameplate)	0- 2.00	2.10- 3.4	3.5- 5.00	5.10- 7.0	7.10- 12.0	12.1- 16.0	16.1- 20.0	
Ext. Cable Length	Wire Size							
25 Ft.	18	18	18	18	16	14	12	Not normally available as flexible extension cord.
50 Ft.	18	18	18	16	14	12	10	
75 Ft.	18	18	16	14	12	10	8	
100 Ft.	18	16	14	12	10	8	8	
150 Ft.	16	14	12	12	8	8	6	
200 Ft.	16	14	12	10	8	6	4	
300 Ft.	14	12	10	8	6	4	4	
400 Ft.	12	10	8	6	4	4	2	
500 Ft.	12	10	8	6	4	2	2	
600 Ft.	10	8	6	4	2	2	1	
800 Ft.	10	8	6	4	2	1	0	
1000 Ft.	8	6	4	2	1	0	0	

IF USING AN EXTENSION CORD OUTDOORS, BE SURE IT IS MARKED WITH THE SUFFIX "W-A" ("W" IN CANADA) TO INDICATE THAT IT IS ACCEPTABLE FOR OUTDOOR USE.

## SAFETY PRECAUTIONS

1. Start cutting only after the motor has reached full speed.
2. Release switch immediately if the cut-off wheel stops revolving or if the motor sounds like it is straining.
3. Use only the edge (not the sides) of the wheel for cutting. Do not allow the wheel to twist or bind.
4. Keep flammable and fragile objects away from this tool. Do not allow cut-off sparks to contact the operators hands, feet or face.
5. Keep hands and body away from the revolving wheel. Do not wear loose clothing when using this tool.
6. Store cut-off wheels with care. Do not drop them or subject them to excessive heat, cold or humidity.
7. Make sure that all wheel clamping parts are in good condition and are always used properly. Defective or missing parts may cause damage to wheel.
8. Install the tool securely on a flat, level surface.
9. Always use the tool with the proper voltage specified on the tool's nameplate.

10. All screws have been fully tightened at the factory prior to delivery. Check the screws upon arrival to make sure none have loosened.
11. Cutting with a weak or damaged wheel is very hazardous. After installing a new wheel, leave the tool unplugged and rotate the wheel by hand to see if it is uneven, warped or cracked. If so, discard the wheel and replace it with a new one.
12. Before starting an operation, step back from the tool and make a trial run to confirm that the wheel is in good condition. Trial run periods are:

When replacing the cut-off wheel . . . . . Over 3 minutes.

When starting routine work . . . . . Over 1 minute.

13. Never try to remove or mount cutting material while the cut-off wheel is revolving.
14. Never touch a short cut-off piece until it has had time to cool.
15. Never attempt to cut material larger than the rated cutting capacity of the tool.
16. Never stand in line with the wheel while cutting. Always stand to the side.

### **Read All Instructions And Keep Them For Future Reference**

#### **TOOL SPECIFICATIONS**

CATALOG NUMBER	WHEEL SIZE	RPM	VOLTS (AC ONLY)	AMPS	CUTTING CAPACITY AT 90°	ARBOR SIZE
6165	12"	4000	115	15	3"	1"
6170	14"	3400	115	15	4"	1"

#### **CUT-OFF WHEEL SPECIFICATIONS**

CATALOG NUMBER	WHEEL SIZE	TYPE	MAXIMUM NO LOAD SPEED	MAXIMUM THICKNESS	MINIMUM THICKNESS	ARBOR HOLE SIZE
49-93-6220	12"	Reinforced Resinoid Bond Type A36NB	4500	9/64"	7/64"	1"
49-93-6230	14"	Reinforced Resinoid Bond Type A36NB	3900	9/64"	7/64"	1"

#### **STANDARD EQUIPMENT**

NOTE— The use of any parts or accessories not mentioned in this manual may be hazardous.

**Spanner Wrench**  
Cat. No. 49-96-7610

**12" Wheel for No. 6165**  
Cat. No. 49-93-6220

**13mm and 17mm Open End Wrench**  
Cat. No. 49-96-4120

**14" Wheel for No. 6170**  
Cat. No. 49-93-6230

## OPERATION

This tool is supplied with a wheel already installed. Check the wheel before operating tool as described on page 5 (numbers 11 and 12). If the wheel is damaged, it should be removed.

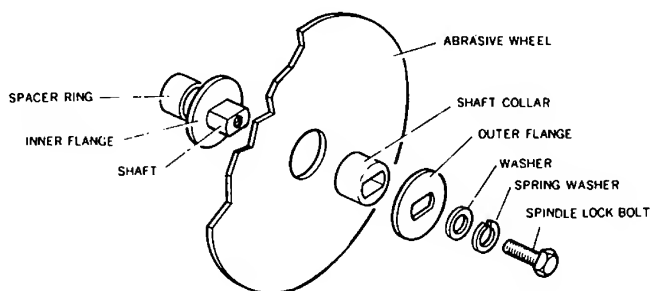
**ALWAYS UNPLUG THE TOOL BEFORE CHANGING WHEELS**

### Removing Wheels

Release the hold down chain from the motor housing by depressing the handle and lifting the chain off the hook. Loosen the wing screw on the outside of the guard and swing the cover away to expose the wheel arbor assembly. Fit the spanner wrench into the two holes on the outer flange. Holding the spanner wrench steady, turn the spindle lock bolt counterclockwise with the 17mm wrench to loosen it. Remove the parts in the order shown in the diagram below.

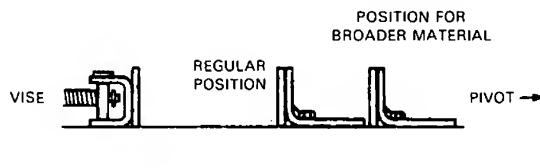
### Installing wheels

Check the wheel flanges to be sure that they are free of burrs or nicks. Small burrs or nicks should be removed to prevent uneven pressure which causes wheel damage. Examine the wheel for cracks, chipping or warping. If the wheel is defective, discard it and select another one which is in good condition. Install the wheel and other parts in the order shown in the illustration below. Hold the outer flange with the spanner wrench and tighten the spindle lock bolt with the 17mm wrench just enough to prevent wheel slippage. Tighten the bolt firmly enough to flatten the spring washer but **DO NOT USE EXCESSIVE PRESSURE**. Overtightening the bolt may damage the wheel and flanges. Swing the guard cover back into position and tighten the wing screw.



### Vise

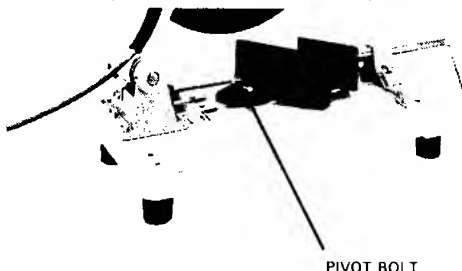
The stationary jaw of the vise can be bolted in two positions. Set the jaw in the position closest to the pivot when cutting broader materials. The bolts holding the jaw can be loosened or secured with the 17mm wrench provided.



## ANGLE CUTTING

The vise on the base can be used for angle cut-offs up to 45°.

Loosen the pivot bolt on the stationary jaw and rotate this jaw to the desired angle. Retighten the bolt (See illustration below).



## Cutting

Clamp the material firmly in the vise and be sure that the long pieces are adequately supported. Squeeze the switch to turn on the motor and allow the wheel to reach full speed. Gently pull the handle down to lower the wheel onto the material.

To cut through the material, use light pressure. Heavy pressure makes cutting inefficient. After a cut is completed, raise the handle and release the switch. Allow the wheel to come to a complete stop before removing the workpiece. Secure the hold down chain to allow the tool to be carried by its carrying band.

## CAUTION

This tool is designed so it will not overheat during normal operation. The motor can overheat and become damaged if it is subjected to excessive loads. If the motor housing heats up considerably, allow the motor to cool off before resuming cutting operations. To avoid overheating, do not use excessive pressure when cutting materials and pay attention to the surface temperature of the motor housing.

## MAINTENANCE

**ALWAYS UNPLUG THE TOOL BEFORE PERFORMING ANY MAINTENANCE.** Any servicing other than that which is recommended in this manual must be performed by a MILWAUKEE Service Center or Authorized Service Station.

### USE ONLY IDENTICAL REPLACEMENT PARTS

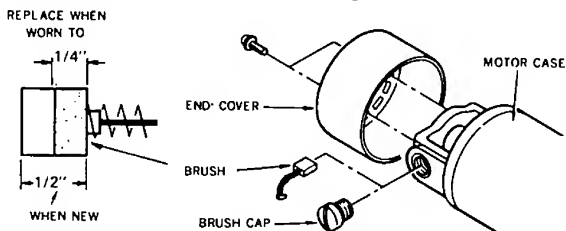
Parts List Available On Request.

When ordering, include Catalog No. and Serial No. of Tool.

Write: MILWAUKEE ELECTRIC TOOL CORP. SERVICE DEPT.  
13135 W. Lisbon Rd. Brookfield, WI. 53005

Clean and oil the vise lead screw periodically to reduce wear caused by abrasive grit. Remove the cut-off wheel residue build up inside the wheel guard. Retighten any loose parts.

The carbon brushes should be inspected periodically for wear. To inspect brushes, unplug the tool and remove the motor end cover to expose the brush caps. Remove the brush caps and extract the brushes. If the carbon portion of one or both brushes is worn to  $1/4''$  or to the wear limit line, replace both brushes. Clean the end cover before replacing it on the motor case.



## LUBRICATION

To lubricate the Chop Saw, unplug the tool and remove the wheel and wheel flanges as described on page 6. Remove the four phillips head screws from the gear case cover and lift the cover off to expose the inside of the gear case. Clean out the old grease with a clean rag and replace it with 2 ounces of MILWAUKEE Type "E" Grease (1 lb. can Catalog No. 49-08-4120). Replace the gear case cover. Replace the wheel as described on page 6.

The MILWAUKEE Electric Tool Corporation assumes no responsibility for any damage or accidents resulting from the misuse of this tool, its misapplication, or the non-adherence to precautionary safety measures.

## WARRANTY

Every MILWAUKEE Tool is thoroughly inspected and tested before leaving the factory. Should any trouble develop, return the complete tool prepaid to the Factory, Branch or nearest Authorized Service Station. If inspection shows the trouble is caused by defective workmanship or material, all repairs will be made without charge and the tool will be returned transportation prepaid.

This warranty does not apply where: (1) repairs or attempted repairs have been made by persons other than Factory, Branch or Authorized Service Station personnel; (2) repairs are required because of normal wear; (3) the tool has been misused or involved in an accident; (4) misuse is evident such as caused by overloading the tool beyond its rated capacity; (5) the tool has been used after partial failure or (6) the tool has been used with an improper accessory. No other warranty written or verbal, is authorized.